WE CLAIM:

1. A furnace comprising an open vessel to collect molten silica particles to form a solid, fused silica body, the vessel being composed of a refractory material capable of withstanding a temperature of at least 1600° C., at least the base of the refractory vessel being lined with a material upon which the molten silica particles are deposited, the lining material being crushed particles of a purified, refractory material.

2. A furnace in accordance with claim 1 in which the lining material is essentially the same refractory material as the vessel.

3. A furnace in accordance with claim 1 in which the vessel is composed of zircon.

4. A furnace in accordance with claim 1 in which the lining material is composed of crushed particles of recycled purified material.

5. A furnace in accordance with claim 1 wherein the lining material contains, as contaminants less than 2 ppm Na and no more than 3 ppm K and 6 ppm Fe.

6. A furnace in accordance with claim 1 which further includes a thin sheet of purified glass overlying the lining material on the base of the vessel.

7. A furnace in accordance with claim 6 wherein the layer of glass is fused silica.

8. A method of producing a solid body of fused silica which comprises forming molten, fused silica particles from a precursor material, providing an open, refractory vessel in a furnace, lining at least the base of the vessel with

crushed particles of purified refractory material, and depositing the molten particles of fused silica on the lining material to form a solid, fused silica body.

9. A method in accordance with claim 8 which comprises lining at least the base of the vessel with crushed particles of zircon.

10. A method in accordance with claim 9 which comprises crushing and screening used zircon brick to obtain crushed particles.

11. A method in accordance with claim 10 which comprises screened crushed zircon brick to provide a –4 to +80 mesh size fraction.

12. A method in accordance with claim 8 which further comprises placing a thin sheet of purified glass over the lining material on the base of the vessel and then depositing the molten silica particles on such glass sheet.

13. A method in accordance with claim 12 which comprises placing a thin sheet of fused silica over the lining material.